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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,048	06/26/2001	Harold Kutz	CYPR-CD00231	4180

7590 01/12/2006

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EXAMINER

WOO, STELLA L

ART UNIT PAPER NUMBER

2643

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,048	KUTZ ET AL.	
	Examiner	Art Unit	
	Stella L. Woo	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Insenser Farre et al. (US 6,460,172 B1, hereinafter "Insenser Farre") in view of Cameron et al. (US 6,051,772, hereinafter "Cameron").

Regarding claims 1 and 8, Insenser Farre discloses a microcontroller chip (field programmable system-on-a-chip) comprising:

a processor (microcontroller 2);

an array of configurable circuit blocks (array of programmable digital macro cells 3 and a set of programmable analog cells 4); and

an on-chip analog amplifier (analog subsystem 4 includes a user programmable amplifier; col. 4, lines 38-40).

Insenser Farre differs from claims 1 and 8 in that it does not specify driving a loudspeaker external to the microcontroller chip. However, Insenser Farre does teach use of the microcontroller chip in a communication application (col. 6, lines 21-22) and Cameron teaches the well known use of a sound chip for driving a loudspeaker (speaker 34) external to the sound chip (Figure 7) such that it would have been obvious

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to an artisan of ordinary skill to use the microcontroller chip of Insenser Farre for driving a loudspeaker, as taught by Cameron.

Regarding claim 2, in Insenser Farre, the amplifier 4 appears to be situated adjacent one of the four corners (see Figure 1).

Regarding claims 9, 10, Insenser Farre provides analog input/output pads 6.

3. Claims 4-6, 11-12, 14-15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Insenser Farre in view of Cameron, and further in view of Hirose et al. (US 5,900,780, hereinafter "Hirose").

The combination of Insenser Farre and Cameron differs from claims 4-6, 11-12, 14-15, 17 in that it does not specify the analog amplifier as being a tristate CMOS analog amplifier. However, Hirose teaches the advantages of using a tristate CMOS operational amplifier in an audio amplifier circuit including low power consumption, small distortion in output waveform, and high output drive capacity (col. 1, lines 12-30) such that it would have been obvious to an artisan of ordinary skill to incorporate such use of a CMOS amplifier, as taught by Hirose, within the signal chip audio system combination of Insenser Farre and Cameron for providing a low-power, low-distortion, high output analog amplifier function.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Insenser Farre and Cameron, as applied to claim 1 above, and further in view of Dijkmans et al. (US 4,608,502, hereinafter "Dijkmans").

The combination of Insenser Farre and Cameron differs from claim 3 in that it does not specify a switchable current source. However, Dijkmans teaches the well

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known use of a switchable current source for providing volume control of an audio amplifier (Abstract; col. 2, line 60 – col. 3, line 57) such that it would have been obvious to an artisan of ordinary skill to use a switchable current source, as taught to be well known by Dijkmans, for providing volume control in the combination of Insenser Farre and Cameron (in Insenser Farre, microcontroller 2 controls integrated circuit functions).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Insenser Farre in view of Cameron, and further in view of Billings (US 5,248,843).

The combination of Insenser Farre and Cameron differs from claim 7 in that it does not specify that the external speaker is a 32-ohm speaker. However, Billings teaches the well known use of a 32 ohm speaker which is controlled by an sound chip (col. 6, lines 1-8) such that it would have been obvious to an artisan of ordinary skill to incorporate select a 32 ohm speaker, as taught by, as the speaker which is driven by the combination of Insenser Farre and Cameron.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Insenser Farre, Cameron and Hirose, as applied to claim 11 above, and further in view of Dijkmans for the same reasons applied to claim 3 above.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Insenser Farre, Cameron and Hirose, as applied to claim 11 above, and further in view of Billings for the same reasons applied to claim 7 above.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Insenser Farre, Cameron and Dijkmans, as applied to claim 3 above, and further in view of Hirose for the same reasons applied to claim 4 above.

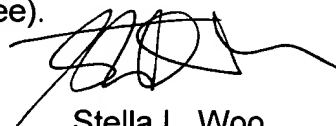
Response to Arguments

9. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stella L. Woo whose telephone number is (571) 272-7512. The examiner can normally be reached on Monday-Tuesday, Thursday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stella L. Woo
Primary Examiner
Art Unit 2643